

**SECTION F**  
**PROCEDURES TO PREVENT HAZARDS**

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## **SECTION F – PROCEDURES TO PREVENT HAZARDS**

### **F-1 SECURITY [Code of Federal Regulations {CFR} §270.14(b)(4) AND 264.14]**

Day & Zimmermann Kansas LLC (D&Z) is a secured facility. Access to the hazardous waste management units are controlled 24-hours a day. The 1800, 1900, and 2700 Areas are currently fenced and gated and the hazardous waste management units are also locked. The open detonation (OD) grounds area is fenced and locked and access is controlled to the area.

#### **F-1a Security Procedures and Equipment [40 CFR §270.14(b)(4) and 264.14]**

##### **F-1a(1) 24-Hour Surveillance System [40 CFR §270.14(b)(4) and 264.14]**

The security guard force routinely patrol the D&Z property 24 hours a day, 7 days a week, every day of the year when explosives are on-site. The routine patrol includes all the hazardous waste management units. In order to assure adequate security, schedules and procedures for surveillance are kept confidential. During periods when no explosives are present, the gates to all hazardous waste areas (1800, 1900, and 2700) and all of the hazardous waste buildings will be locked.

##### **F-1a(2)(a) Barrier [40 CFR §270.14(b)(4) and 264.14]**

The 1800, 1900, and 2700 Areas are currently fenced and gated and the hazardous waste management units are locked. All doors at structures used for storage of hazardous waste are kept closed and locked. The OD grounds area is fenced and locked and access is controlled to the area.

##### **F-1a(2)(b) Means to Control Entry [40 CFR §270.14(b)(4) and 264.14]**

All hazardous waste management units are fenced and access is controlled. Photo-type badges are required of all D&Z employees (badges must be worn at all times while employees are within facility boundaries). Visitors, lessees, and contractors are also issued escort only badges, which also must be displayed prominently at all times while the person is within facility boundaries. Lessee must coordinate their activities in the hazardous waste management units with the Guard Department, and access to these areas is controlled by the Guard Department. Clear zones are maintained both inside and outside the facility fences for the controlled areas and are patrolled by guards. A designated Key Control Officer is responsible for keeping and issuing master keys to various restricted areas with the facility. A logbook is kept to document key issuance and return.

The hazardous waste storage areas and the OD grounds are restricted access areas with their own fences, gates, signs, and warning light or flag system. The access gates for the hazardous waste storage areas and OD grounds are kept locked except when personnel are working inside an individual area.

##### **F-1a(3) Warning Signs [40 CFR §270.14(b)(4) and 264.14]**

Signs are posted along the perimeter of the D&Z facility warning against unauthorized entry. All hazardous waste management units have signs that read “Danger-Unauthorized Personnel Keep Out.” These signs are in English, the predominant language in the geographic area surrounding the facility. The signs are legible from a distance of 25 feet, and are visible from access roads.

In the hazardous waste management areas, warning signs are placed on or adjacent to the doors of igloos 1934, 1935, 1936, 1942, 1967, 1969, 1970, and 1979 and Magazine 1816 (within the 1800 Area). Warning signs are also placed on the fences surrounding igloos 2707, 2708, and 2709.

**F-1b Waiver [40 CFR §270.14(b)(4) and 264.14]**

Not applicable

**F-1b(1) Injury to Intruder [40 CFR §270.14(b)(4) and 264.14]**

Not applicable

**F-1b(2) Violation Caused by Intruder [40 CFR §270.14(b)(4) and 264.14]**

Not applicable

**F-2 Inspection Schedule [40 CFR §270.14(b)(5) and 264.15, with the exception of the exclusions and modifications noted in *Kansas Administrative Regulations* {KAR} 28-31-264]**

All hazardous waste management areas are inspected on a weekly basis. The OD inspections are performed daily, as used. At D&Z, all equipment checks and procedures for general safety and emergency equipment, monitoring equipment, operating and structural equipment, and security devices are incorporated into inspection schedules which are performed at routine frequencies. These inspections are intended to ensure standard operations of hazardous waste management units and to ensure readiness of equipment and supplies in the event of an emergency and prevent, detect, or respond to environmental or human health hazards. Inspection logs are maintained at the facility for a minimum of three years from the date of the inspection. The inspection schedule is maintained at the facility.

**F-2a General Inspection Requirements [40 CFR §270.14(b)(5), 264.15(a) and (b) (with the exception of the exclusions and modifications noted in KAR 28-31-264), and 264.33]**

**F-2a(1) Types of Problems [40 CFR §270.14(b)(5) and 264.15(b)(3)]**

A checklist is utilized for the inspection of all hazardous waste management units. The checklist identifies the type of problems which are to be looked for during the inspections. The checklist also has room to document any needed repairs or remedial action. Additional observations can also be documented, as well as the date of repairs or other remedial actions.

**F-2a(2) Frequency of Inspections [40 CFR §270.14(b)(5) and 264.15(b)(4), with the exception of the modification noted in KAR 28-31-264]**

All equipment inspections for KANSAS HAZARDOUS WASTE PROGRAM-regulated hazardous waste management units are incorporated into inspection schedules which are performed at regular intervals. These inspections are intended to ensure that equipment is maintained and in proper condition.

**F-2a(3) Schedule for Remedial Action [40 CFR §270.14(b)(5) and 264.15(c)]**

If any remedial actions are noted during the hazardous waste management facility inspections then D&Z will remedy the deteriorated or malfunctioning equipment or structures. A schedule will be developed for the remedial actions that will ensure that the problem does not lead to an environmental or human health hazard. If a hazard is noted that is imminent or that has already occurred, remedial action will be taken immediately.

**F-2a(4) Inspection Log [40 CFR §270.14(b)(5) and 264.15(d)]**

Copies of the inspection logs completed during the inspection of the hazardous waste management units are included as Figures F-1 and F-2.

**F-2b Specific Process Inspection Requirements [40 CFR §270.14(b)(5)]**

**F-2b(1) Container Inspection [40 CFR §270.14(b)(5) and 264.174, with the exception of the modification noted in KAR 28-31-264]**

Hazardous wastes at D&Z are stored in containers. All hazardous waste management units are inspected on a weekly basis. The inspection involves looking for leaking containers and deterioration of containers and the containment system caused by corrosion or other factors. Inspection details for the storage areas are presented in Table F-1. Storage area inspections are documented on Day & Zimmermann Form DZI-933, Figure F-2. Inspection logs are maintained at the facility for a minimum of three years from the date of the inspection.

**F-2b(2) Tank System Inspection [40 CFR §270.14(b)(5) and 264.195, with the exception of the exclusion noted in KAR 28-31 264]**

Not applicable.

**F-2b(3) Waste Pile Inspection [40 CFR §270.14(b)(5), 270.18(d) and 264.254(b)]**

Not applicable.

**F-2b(4) Surface Impoundment Inspection [40 CFR §270.14(b)(5), 270.17(c) and 264.226(b) and (c)]**

Not applicable.

**F-2b(5) Incinerator and Associated Equipment Inspection [40 CFR §270.14(b)(5) and 264.347(b)]**

Not applicable.

**F-2b(6) Landfill Inspection [40 CFR §270.14(b)(5) and 264.303(b)]**

Not applicable

**F-2b(7) Land Treatment Facility Inspection [40 CFR §270.14(b)(5) and 264.273(g)]**

Not applicable.

**F-2b(8) Miscellaneous Unit Inspection [40 CFR §270.14(b)(5) and 264.174, with the exception of the modification noted in KAR 28-31-264]**

The OD inspections are performed daily, as used. Figure F-3 is completed for the OD grounds inspections. The inspections of the OD grounds include visual inspection of the fence and gate and inspection for visual debris. Inspection logs are maintained at the facility for a minimum of three years from the date of the inspection.



**F-2b(9) Boilers and Industrial Furnace Inspection [40 CFR §270.14(b)(5), 264.15 (with the exception of the exclusions and modifications noted in KAR 28-31-264), 266.102(a)(2)(ii), and 266.111(e)(3)]**

Not applicable.

**F-2b(10) Containment Building Inspection [40 CFR §270.14(b)(5) and 264.174, with the exception of the modification noted in KAR 28-31-264]**

Not applicable.

**F-2b(11) Drip Pad Inspection [40 CFR §270.14(b)(5) and 264.574]**

Not applicable.

**F-3 Document of Preparedness and Prevention Requirements [40 CFR §270.14(b)(6) and 264.32(a)-(d)]**

D&Z has facility-wide documentation of on-site preparedness and prevention measures. The procedures for hazardous waste management units are addressed in the Contingency Plan. For additional details regarding the Contingency Plan, see Section G.

D&Z operates many industrial processes, some of which generate hazardous waste or hazardous waste constituents. It is the policy of D&Z to control pollution to the environment through the operation and maintenance of the facility in such a manner as to comply with all applicable federal, state, interstate, or local requirements, regulations, and standards, including those contained in the Kansas Hazardous Waste Management regulations (K.A.R. Title 28, Article 31) Subpart C of Part 264.

**F-3a Equipment Requirements [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.32]**

The Contingency Plan contains an updated list of all emergency equipment utilized for emergencies at hazardous waste management units (Section G). This information is available to the installation's On-Scene Coordinator (OSC) and the cleanup crews for use in the containment or cleanup of a spill to prevent pollutant migration.

All safety and emergency equipment for KANSAS HAZARDOUS WASTE PROGRAM-regulated hazardous waste management units are inspected monthly. The inspection is intended to ensure that equipment is maintained and is in proper working condition in the event of an emergency. Table F-2 presents the inspection schedule for the safety and emergency equipment at the hazardous waste management units. Figure F-1 is the form (D&Z 1072) for documenting inspection results.

**F-3a(1) Internal Communications [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.32(a)]**

Internal communications at hazardous waste management units at D&Z are made by direct voice contact. Each hazardous materials transport is equipped with a two-way radio and/or cell phone.

Fire phones, two-way radios, cell phones, and telephones are located throughout the general facility for use in contacting the OSC, or other control agencies in the event of an emergency. The OSC can readily summon off-site emergency assistance either from the scene (see Section G).

**F-3a(2) External Communications [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.32(b)]**

D&Z operates its own limited emergency response facilities. In addition, if support is required from external entities, D&Z has executed agreements with other fire, rescue, emergency medical, and similar facilities (see the Contingency Plan – Section G). If external support is required, this would be communicated from on-scene personnel to the OSC, who would contact the appropriate external agencies utilizing commercial telephone service.

**F-3a(3) Emergency Equipment [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.32(c)]**

Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that utilizing foams, inert gas, or dry chemicals), spill control equipment, and decontamination equipment are available at several locations. No attempt is made to extinguish fires in explosive areas.

The Contingency Plan contains an updated list of all emergency equipment at the facility used for response to unplanned releases of hazardous materials or wastes (see Section G). A listing of types of equipment, inspection frequency, and type of problem for each type of equipment that is inspected, is presented in Table F-2.

**F-3a(4) Water and Fire Control [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.32(d)]**

The facility has fire hydrants located at convenient locations with a static pressure of 65 pounds or greater. Water is available at adequate pressure and volume to fight fires at D&Z.

**F-3a(5) Testing and Maintenance of Equipment [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.33]**

A listing of types of equipment, inspection frequency, and problem for which each type of equipment is inspected is presented in Table F-2.

**F-3a(6) Access to Communications or Alarm System [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.34]**

Whenever hazardous waste is being handled, all personnel involved in the operation have immediate access to a cell phone capable of summoning emergency assistance.

**F-3b Aisle Space Requirements [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.35]**

The hazardous waste storage areas are accessible to fire and other emergency equipment by paved roads. At the hazardous waste storage areas, there is a minimum of 20 feet between each storage igloo, and each igloo is served by a gravel road.

Within the storage igloos in the 1900 Area, a minimum of three feet of aisle space is maintained between rows or stacks of hazardous waste containers. Within the storage magazine in the 1800 Area, a minimum of three feet of aisle space is maintained between rows or stacks of hazardous waste containers. Within

the smaller storage igloos at the 2700 Area, aisle space of two feet is maintained. This amount of aisle space is sufficient for the movement of containers and for emergency and cleanup operations.

As entry into the hazardous waste storage igloos and magazines, and OD grounds for firefighting purposes is prohibited, sufficient aisle space for the movement of firefighting equipment is not necessary.

**F-3c Documentation of Arrangements with:**

**F-3c(1) Police/Fire Department [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.37(a)(1)]**

The Labette County, Number 9 Fire Department, Neosho Township Fire Department, and the Parsons Fire Department are available to provide fire-fighting.

**F-3c(2) Emergency Response Teams [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.37(a)(2) and (a)(3)]**

The Labette County, Number 9 Fire Department, Neosho Township Fire Department, and the Parsons Fire Department are available to respond to emergencies at the facility.

**F-3c(3) Local Hospitals [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.37(a)(4)]**

Several area hospitals have signed agreements to provide medical treatment in case of emergencies. The coordination agreements are in place with these departments.

**F-3c(4) Document Agreement Refusal [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.37(b)]**

Not applicable.

**F-4 PREVENTION PROCEDURES, STRUCTURES, AND EQUIPMENT [40 CFR §270.14, with the exception of the exclusions and modifications noted in KAR 28-31-270]**

This section describes procedures and equipment employed at D&Z to:

- Prevent hazards during unloading/loading operations,
- Prevent runoff from hazardous waste management units,
- Prevent contamination of water supplies,
- Mitigate effects of equipment and power failure,
- Prevent personnel exposure to hazardous waste, and
- Prevent releases to atmosphere.

**F-4a Unloading Procedures [40 CFR §270.14(b)(8)(i)]**

Loading and unloading safety procedures for vehicles containing hazardous substances for storage at the hazardous waste management units as well as treatment at the OD grounds are addressed in the Standing Operating Procedures for OD operations (see Section D).

Loading and unloading safety procedures specifically for vehicles are as follows:

<b>Title</b>	<b>Standing Operating Procedure (SOP)</b>
Unloading Commercial Trucks Containing Explosives or Explosive Components	KN-0000-L-007
D&Z Line Service Transportation Vehicles	KN-0000-L-015

Copies of the referenced SOPs above are included with Appendix F-1.

**F-4b      Runoff [40 CFR §270.14(b)(8)(ii)]**

No containers of hazardous wastes are stored open or outside one of the hazardous waste management units. All hazardous waste containers are stored in either igloo-type structures or the magazine. The roofs of the structures provides protection for direct run-on or precipitation onto the waste containers. All hazardous waste storage igloos and the magazine are built above grade to prevent surface water run-on, and the area around each hazardous waste management unit is either naturally or artificially graded to provide drainage away from the units; therefore runoff associated with the storage areas is not an issue.

All efforts are made to prevent runoff from hazardous waste handling areas to other areas within the facility or to the environment. The facilities maintenance personnel are responsible for containment and cleanup of contaminated water draining from the hazardous waste handling areas including the OD grounds. Typically, runoff contaminated with explosives is contained temporarily diking a small area near the source of the contamination to contain the runoff. The accumulated liquid is pumped and transported to the facility industrial wastewater treatment plant for treatment. The temporary dike is breached after complete decontamination is achieved.

**F-4c      Water Supplies [40 CFR §270.14(b)(8)(iii)]**

All water supplies at D&Z are obtained off-site from the Neosho River provided by the Great Plains Development Authority. The facility has a surface water intake and water treatment plant located on the Neosho River, about one mile east of the easternmost boundary of D&Z. This water intake is the nearest water supply intake to the facility. The distance to this intake, coupled with procedures for containment and cleanup of spills and other potential releases of hazardous substances, assure that water supplies will not become contaminated through activities at the hazardous waste management units or the OD grounds. Groundwater is not utilized within the boundaries of the facility. There is one groundwater withdrawal well within 1 mile of the facility boundary; it is located approximately 1 mile southwest of the D&Z facility. This well is not known to be utilized for potable water.

The procedures summarized above and outlined in greater detail in Standing Operating Procedures (Section D) and in the Contingency Plan (Section G) are designed to prevent contamination of water supplies through prompt and effective response to any spills or releases of hazardous substances.

**F-4d      Equipment and Power Failure [40 CFR §270.14(b)(8)(iv)]**

A power outage may cause accidental personal injury for personnel performing activities within structures. Workers in the hazardous waste storage structures are supplied with special explosion-proof flashlights, as no electrical fixtures or outlets are allowed within the structures for safety reasons.

The major electrical power need at the OD grounds is to supply an electrical charge for detonating wastes. A power outage may delay detonation, but would not generally provide an opportunity for accidental personal injury. If the power outage were to persist for several hours, or if other conditions changed during the power outage, such that detonation were no longer appropriate, the wastes would either be secured or removed, and the treatment process would be reinitiated after power was restored.

Other equipment used at the OD grounds includes heavy equipment for grading, digging, and similar activities. If any piece of such equipment were to fail, working units would be substituted from on-site stock (if available). If substitute equipment units were not available, the OD activities would be delayed until the faulty equipment was replaced or repaired.

**F-4e Personnel Protection Procedures [40 CFR §270.14(b)(8)(v)]**

D&Z maintains an inventory of protective clothing and equipment (see Table F-3). Training is provided on the location and use of protective clothing and equipment to employees as a part of the facility's training program. Personnel are also advised and instructed regarding personal items which are banned as safety precautions (e.g., cigarettes and lighters or matches).

**F-4f Procedures to Minimize Releases to the Atmosphere [40 CFR §270.14(b)(8)(vi)]**

Releases to the atmosphere are prevented by following approved SOPs applicable to the OD operations (Section D) and by following method for cleaning as outlined in the D&Z Contingency Plan (Section G).

**F-5 Prevention of Reaction of Ignitable, Reactive, and Incompatible Wastes [40 CFR §270.14(b)(9)]**

D&Z generates, stores, and treats a variety of ignitable, reactive, and incompatible (IRI) wastes. Many of these wastes are treated at the OD grounds (see Table C-4, Section C, for a listing of wastes potentially treated at the OD grounds; and see Section C in general for a discussion of types/categories of wastes, waste characterization, and waste characteristics).

**F-5a Precautions to Prevent Ignition or Reaction of Ignitable, Reactive, or Incompatible Wastes [40 CFR §270.14(b)(9) and 264.17(a) and (b)]**

As required by 40 CFR §264.17(a) and (b) the following precautions are observed when managing IRI wastes. These precautions are taken to prevent accidental ignition or reaction of ignitable or reactive wastes, and mixing of incompatible wastes.

- No flame-producing devices (e.g., matches, cigarette lighters) shall be allowed within hazardous waste treatment or storage areas. Signs indicating this are conspicuously placed in all areas where there is a hazard from ignitable or reactive wastes.
- Non-sparking tools (e.g., aluminum, brass, beryllium, or wood) shall be used to scoop explosive sludge from sumps; this sludge is then placed in approved containers. Containers of waste explosives are properly labeled and sealed.
- Inert, chemical, and explosive wastes shall not be brought into contact with each other to assure that no heat-producing chemical reactions occur.
- Reactive or ignitable wastes shall be shielded from direct sun.
- All hazardous waste containers shall be inspected thoroughly. Any defects or foreign material must be reported to the operator for disposition.

- Precautions shall be taken to control decomposition of explosives accumulated in supplies and cleaning equipment such as mops, brooms, and similar items.
- Cleaning equipment that has been contaminated shall be placed in clearly marked covered containers, and must be handled in an approved manner.
- Depending upon contents, all hazardous waste containers shall be labeled or stamped as “Hazardous Waste.”
- Incompatible hazardous wastes shall not be stored in the same manner or in the same area.
- Periodic conductivity tests of safety shoes and calibration checks of the Conductive Shoe Tester shall be performed as specified by the area supervisor in the instructions posted at the site of the testing.
- All containers are properly grounded when ignitable waste is being transported in or out to prevent static charges.

**F-5b      General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Wastes [40 CFR §270.14(b)(9) and 264.17(a)]**

Table F-4 is used to guarantee that only compatible wastes are stored together. Two or more wastes are said to be compatible when their characteristics are such that a quantity of two or more of the items stored together is not more hazardous than a comparable quantity of any one of the items stored alone. See Table F-4 for guidelines used in determining potentially incompatible waste materials or components.

**F-5b(1)      Documentation of Adequacy of Procedures [40 CFR §270.14(b), with the exception of the exclusions and modifications noted in KAR 28-31-270, and 264.17(c)]**

D&Z uses the document “Law, Regulations and Guidelines for Handling of Hazardous Waste,” California Department of Health, February 1975 as the guidelines for determining potentially incompatible waste materials or components and to ensure ignitable, reactive and incompatible wastes are properly managed at the facility (see Table F-4).

**F-5c      Management of Ignitable or Reactive Wastes in Containers [40 CFR §270.15(c) and 264.176]**

See Section D for details on the management of wastes in containers. In addition to the general precautions for ignitable or reactive wastes discussed above, requirements specific to management of ignitable or reactive waste in containers are as follows:

1. All hazardous waste containers shall be inspected thoroughly. Any defects or foreign material shall be reported to the operating supervisor for disposal.
2. All hazardous waste containers shall have one or more of the following identifications prior to offsite shipment:
  - a. Ignitable hazardous waste
  - b. Toxic hazardous waste
  - c. Corrosive hazardous waste
  - d. Reactive hazardous waste

Ignitable or reactive wastes treated at the OD grounds are placed in containers only for transport from other operational areas to the treatment area or for temporary storage in instances where SOP requirements cannot be immediately met for thermal treatment of these wastes at the OD grounds (e.g., unsuitable weather conditions). The general management of wastes in containers is addressed in Section D.

**F-5d Management of Incompatible Wastes in Containers [40 CFR §270.15(d) and 264.177]**

Incompatible wastes are never placed in the same container. Precautions are also taken to assure that incompatible wastes in containers are not stored in the same location. Incompatible wastes treated at the OD grounds are placed in containers only for transport from other operational areas to the treatment area or for temporary storage in instances where SOP requirements cannot be immediately met for thermal treatment of these wastes at the OD grounds (e.g., unsuitable weather conditions). The general management of wastes in containers is addressed in Section D.

**F-5e Management of Ignitable or Reactive Wastes in Tank Systems [40 CFR §270.16(j) and 264.198]**

Not applicable.

**F-5f Management of Incompatible Wastes in Tank Systems [40 CFR §270.16(j) and 264.199]**

Not applicable.

**F-5g Management of Ignitable or Reactive Wastes Placed in Waste Piles [40 CFR §270.18(g) and 264.256]**

Not applicable.

**F-5h Management of Incompatible Wastes Placed in Waste Piles [40 CFR §270.18(h) and 264.257]**

Not applicable.

**F-5i Management of Ignitable or Reactive Wastes in Surface Impoundments [40 CFR §270.17(h) and 264.229]**

Not applicable.

**F-5j Management of Incompatible Wastes in Surface Impoundments [40 CFR §270.17(h) and 264.230]**

Not applicable.

**F-5k Management of Incompatible Ignitable or Reactive Wastes Placed in Landfills [40 CFR §270.21(f) and 264.312]**

Not applicable.

**F-5l Management of Incompatible Wastes Placed in Landfills [40 CFR §270.21(g) and 264.313]**

Not applicable.

**F-5m      Management of Ignitable or Reactive Wastes Placed in Land Treatment Units [40 CFR §270.20(g) and 264.281]**

Not applicable.

**F-5n      Management of Incompatible Wastes Placed in Land Treatment Units [40 CFR §270.20(h) and 264.282]**

Not applicable.

**F-5o      Management of Incompatible Wastes Placed in Containment Buildings [40 CFR §270.14(a) and 264.1101(a)(3)]**

Not applicable.



## FIGURES

**FIGURE F-1**

**KANSAS HAZARDOUS WASTE PROGRAM EQUIPMENT INSPECTION**

Complete and forward this form monthly to Environmental Engineering for review and retention.

A = Acceptable

UA = Unacceptable

Inspector's Signature	Title	Badge Number	
Date of Inspection	Type of Inspection		
Equipment	Inspection Items	A	UA
1. Emergency Shower and Eyewash	Water Pressure, Leaks		
2. Fire Extinguisher	Charged		
3. Fire Alarm System	Power, Operational		
4. Telephone System	Power, Operational		
5. First Aid Equipment and Supplies	In Stock, Operational		
6. Standard Industrial Absorbents	Out of Stock		
7. 55-Gallon Drums	Out of Stock		

OBSERVATION (include item number)


DATE AND NATURE OF REPAIRS/REMEDIAL ACTION


**FIGURE F-2**

**GENERAL HAZARDOUS WASTE FACILITY INSPECTION FORM**

HAZARDOUS WASTE FACILITY INSPECTION

CODES: A = ACCEPTABLE, UA = UNACCEPTABLE, N/A = NOT APPLICABLE

INSPECTOR NAME	TITLE	BADGE NUMBER	DATE OF INSPECTION		
LOCATION			TIME OF INSPECTION		
ITEM	TYPE OF PROBLEMS	A	UA	N/A	
1. CONTAINER PLACEMENT AND STACKING	AISLE SPACE SUFFICIENT, HEIGHT OF STACKS				
2. SEALING OF CONTAINERS	OPEN LIDS				
3. LABELING OF CONTAINERS	IMPROPER IDENTIFICATION AND DATE MISSING				
4. CONTAINERS	CORROSION, LEAKAGE, STRUCTURAL DEFECTS				
5. SEGREGATION OF INCOMPATIBLE WASTES	STORAGE OF INCOMPATIBLE WASTES IN SAME AREA				
6. PALLETS	DAMAGED (E.G., BROKEN WOOD, WARPING NAILS MISSING)				
7. FENCE, GATE, AND LOCK	CORROSION, DAMAGE TO FENCE, STICKING OR CORRODING LOCK				
8. BASE OR FOUNDATION	CRACKS, SPALLING, UNEVEN SETTLEMENT EROSION, AND/OR WET SPOTS				
9. DIKES	CRACKS AND/OR DETERIORATION				
10. WARNING SIGNS	DAMAGED OR MISSING				
11. VISIBLE DEBRIS	REMOVE ALL VISIBLE DEBRIS				
12. SOIL COVER (2 FEET)	EROSION				
OBSERVATION (INCLUDE ITEM NUMBER) _____					
DATE AND NATURE OF REPAIRS/REMEDIAL ACTION _____					

**FIGURE F-3**  
**DAY & ZIMMERMANN KANSAS LLC – OPEN DETONATION DAILY ACTIVITY LOG**

Date:	Operators:			Gates Secured & Notifications Made:	Time Started:
Weather Conditions:	Cloud Cover:	Wind Speed:	Rain (y/n)	Snow (y/n)	Acceptable (y/n)
Other Issues:					

**Items Treated:**

Description	Quantity:	Total Net Explosive Weight:	Time Disposed & Pit Number:

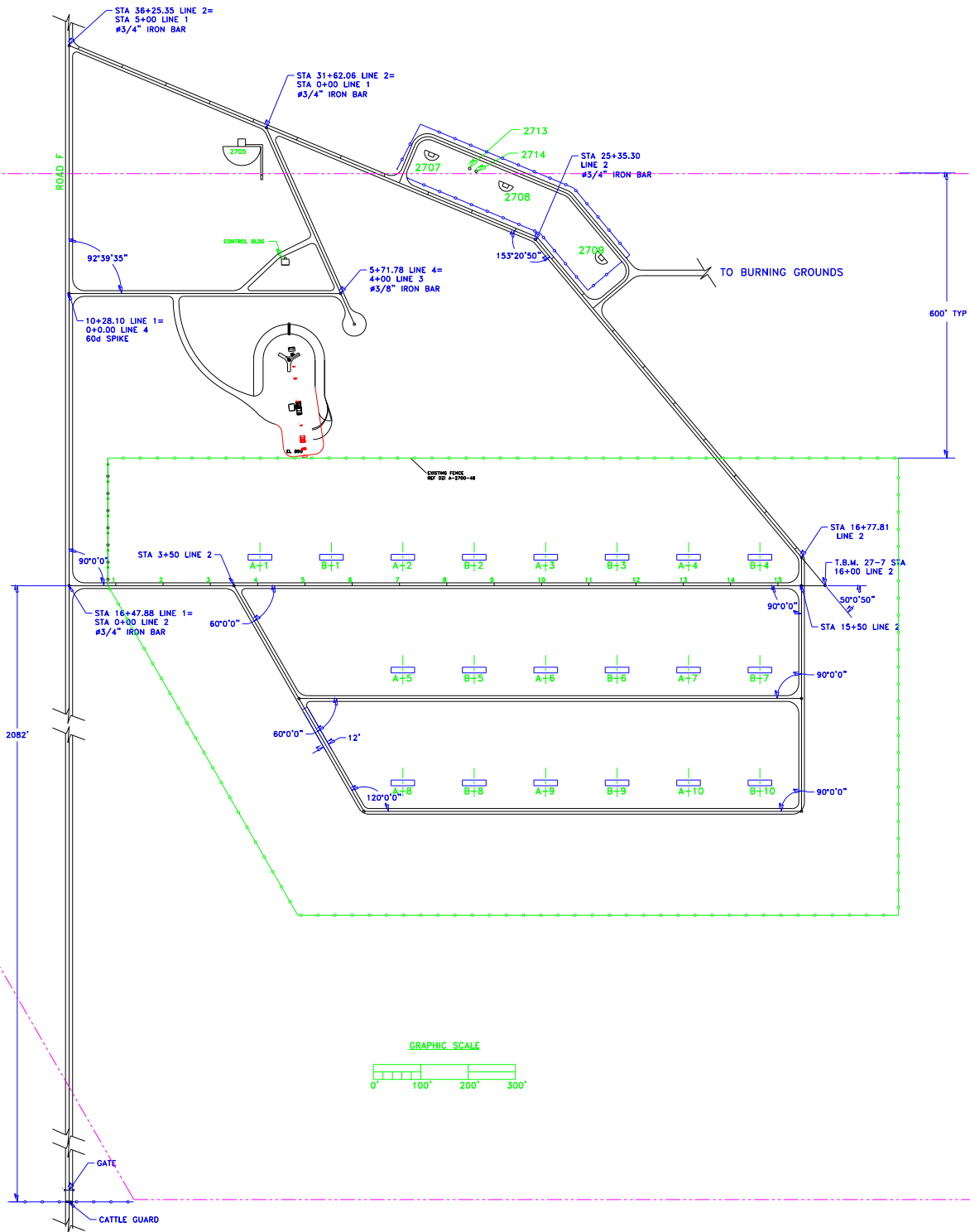
**After Detonation Inspection:**

Site Walk Conducted: (y/n)	Area Clear (y/n)	Time Completed:	
----------------------------	------------------	-----------------	--

**Problems & Corrective Actions:**


\_\_\_\_\_  
Supervisor Signature:

**FIGURE F-3 (Continued)**  
**DAY & ZIMMERMANN KANSAS LLC – OPEN DETONATION DAILY ACTIVITY LOG**  
**OPEN DETONATION GROUNDS MAP**



## **TABLES**

**TABLE F-1**

**HAZARDOUS WASTE STORAGE MANAGEMENT UNIT INSPECTION REQUIREMENTS**

<b>SPECIFIC ITEM INSPECTED</b>	<b>TYPE OF PROBLEM</b>	<b>INSPECTION FREQUENCY</b>
Container placement and stacking	Aisle space, stack height	Weekly
Sealing of containers	Open lids	Weekly
Labels	Improper identification, date	Weekly
Containers	Corrosion, leaking, structural defects	Weekly
Segregation of incompatible wastes	Storage of incompatible wastes within the same area	Weekly
Pallets	Damaged	Weekly
Fence, gate, locks	Corrosion, damage to fence, sticking or corroding lock	Weekly
Base or foundation	Cracks, deterioration	Weekly
Dikes	Cracks, deterioration	Weekly
Ramps	Cracks, deterioration	Weekly
Warning signs	Damaged, missing	Weekly
Loading/unloading areas	Spills	Weekly
Soil Cover (2 feet)	Erosion	Weekly

Notes:

Areas subject to spills, such as loading and unloading areas, are inspected daily when in use.

**TABLE F-2**

**SAFETY AND EMERGENCY EQUIPMENT INSPECTION SCHEDULE**

<b>Type of Equipment</b>	<b>Type of Problem</b>	<b>Frequency of Inspection</b>
Emergency shower and eyewash	Inadequate water pressure, leaking	Monthly
Fire Extinguishers	Need recharging	Monthly
Fire alarm system	Power failure, not operational	Monthly
Telephone system	Power failure, not operational	Monthly
First aid equipment and spill control supplies	Out of stock or inoperative	Monthly
Portable fire extinguishers	Not operational	Monthly
Fire control equipment	Not operational	Monthly
Decontamination equipment	Not operational	Monthly



**TABLE F-3**

**PERSONNEL PROTECTION EQUIPMENT**

<b>CLOTHING:</b>
Hard Hats
Gloves --
Heat Resistant
Chemical Resistant
Construction-Type
Conductive-Soled Safety Shoes
Non-Conductive Safety Shoes
Acid-Resistant Boots
<b>PROTECTIVE CLOTHING:</b>
Acid-Resistant Coveralls
Flame-Proof Coveralls
<b>EYE PROTECTION:</b>
Safety Glasses
Side Shields for Safety Glasses
Face Shields
Goggles
<b>EAR PROTECTION:</b>
Ear Plugs
Ear Muffs
<b>PERSONAL SAFETY EQUIPMENT:</b>
Respirators
Self-Contained Breathing Apparatus (SCBA)
Safety Showers
Eye Wash Stations
Fire Blankets

**TABLE F-4**

**GUIDELINES FOR DETERMINING POTENTIALLY INCOMPATIBLE WASTE MATERIALS  
OR COMPONENTS**

The mixing of a Group A waste with a Group B waste may have the potential consequences noted:

<b>Group 1-A</b>	<b>Group 1-B</b>
Acetylene sludge	Acid sludge
Alkaline caustic liquids	Acid and water
Alkaline cleaner	Battery acid
Alkaline corrosive liquids	Chemical cleaners
Alkaline corrosive battery fluid	Electrolyte acid
Caustic wastewater	Etching acid liquid or solvent
Lime sludge and other corrosive alkali's	Liquid cleaning compounds
Lime wastewater	Pickling liquor and other corrosive acids
Lime and water	Spent acid
	Spent mixed acid
	Spent sulfuric acid

POTENTIAL CONSEQUENCES:      Heat generation, violet reaction.

<b>Group 2-A</b>	<b>Group 2-B</b>
Asbestos waste and other toxic wastes	Cleaning solvents
Beryllium wastes	Data processing liquids
Unrinsed pesticide containers	Obsolete explosives
Waste pesticides	Petroleum waste
	Refinery wastes
	Retrograde explosives
	Solvents
	Waste oil and other flammable and explosive wastes

POTENTIAL CONSEQUENCES:      Release of toxic substances in case of fire or explosion.

The mixing of a Group A waste with a Group B waste may have the potential consequences noted:

<b>Group 3-A</b>	<b>Group 3-B</b>
Aluminum	Any waste listed in Group 1-A or 1-B
Beryllium	
Calcium	
Lithium	
Magnesium	
Potassium	
Sodium	
Zinc powder and other reactive metals      and metal hydrides	

**TABLE F-4 (Continued)**

**GUIDELINES FOR DETERMINING POTENTIALLY INCOMPATIBLE WASTE MATERIALS  
OR COMPONENTS**

POTENTIAL CONSEQUENCES: Fire or explosion; generation of flammable hydrogen gas.

<b>Group 4-A</b>	<b>Group 4-B</b>
Alcohols	Any concentrated waste listed in Groups 1-A or 1-B
Water	Calcium
	Lithium
	Metal hydrides
	Potassium
	Sodium
	Other water reactive wastes

POTENTIAL CONSEQUENCES: Fire, explosion, or heat generation; generation of toxic or flammable gases.

<b>Group 5-A</b>	<b>Group 5-B</b>
Alcohols	Concentrated Group 1-A or 1-B wastes
Aldehydes	Group 3-A wastes and solvents
Halogenated hydrocarbons and other Reactive organic compounds	
Unsaturated hydrocarbons	

POTENTIAL CONSEQUENCES: Fire, explosion, or violent reaction.

<b>Group 6-A</b>	<b>Group 6-B</b>
Spent cyanide and sulfide solutions	Group 1-B wastes

POTENTIAL CONSEQUENCES: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.

<b>Group 7-A</b>	<b>Group 7-B</b>
Chlorates and other strong oxidizers	Acetic acid and other organic acids
Chlorine	Concentrated mineral acids
Chlorites	Group 2-B wastes
Chromic acid	Group 3-A wastes
Hypochlorites	Group 5-A wastes and other flammable and combustible wastes
Nitrates	
Perchlorates	
Permanganates	
Peroxides	

POTENTIAL CONSEQUENCES: Fire, explosion, or violent reaction.

**APPENDIX F-1**  
**STANDARD OPERATING PROCEDURES**

## **OPERATIONAL INDEX**

### **UNLOADING COMMERCIAL TRUCKS CONTAINING EXPLOSIVES OR EXPLOSIVE LOADED COMPONENTS**

OPRTN.	LOCATION	TITLE
A		Operational Index
B		General Safety Requirements
1	Igloo &/or Dock	Receive Truck at Igloo, Above Ground Magazine or Unloading Dock
2	Igloo &/or Dock	Unload Contents of Truck and Store in Igloo or Above Ground Magazine
3	Igloo &/or Dock	Clean-Up Area
Appendix A	Load Dock	Explosive and Personnel Limits

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## **General Safety Requirements**

### **UNLOADING COMMERCIAL TRUCKS CONTAINING EXPLOSIVES OR EXPLOSIVE LOADED COMPONENTS**

1. The use of material handling equipment shall be in accordance with DOD Safety Manual 4145.26-M.
2. Explosive loaded ammunition or bulk explosive shall not be handled roughly, thrown about, tumbled, dropped or walked over other explosive or ammunition.
3. Loose components or loose rounds of ammunition packing material, conveyors, lift trucks, skids, dunnage, empty boxes and other similar material shall not be stored in a magazine containing ammunition or explosives.
4. Magazines shall be locked at all times except when permitted operations are in progress in the magazine.
5. The number of crews shall not exceed the number of exits. Two (2) or more doors must be unlocked and open when personnel work in magazines having more than one (1) door.
6. Flammable material such as excess dunnage and boxes shall be removed from magazines and igloos. Flammable liquids shall not be stored in magazines containing explosives.
7. Explosive and ammunition in damaged containers shall not be stored in a magazine with ammunition in serviceable containers. Such containers should be repaired or the contents transferred to new or serviceable containers. Open containers and containers with covers not securely fastened must not be allowed in a magazine. Containers that have been opened shall be properly closed again before being restored.
8. Containers of explosives or ammunition shall not be opened or repaired in any magazine containing explosives or ammunition. If special facilities are not available for this type of work, it may be done in the open at least 90 feet from magazines containing ammunition and explosives.
9. When the igloo apron is slippery, i.e., snow, ice or water, sand or salt shall be used to prevent slipping hazards.
10. Personal protective equipment will be prescribed by the Safety Department in conjunction with the Explosive Stores Department.

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11. Two (2) fire extinguishers will be provided at each work location (includes the extinguisher on the truck).
12. During loading and unloading of motor vehicles, the brakes must be set. In addition, a chock must be placed on both sides (front and back) of at least one wheel.
13. No explosives shall be loaded into or unloaded from motor vehicles while their motors are running.
14. Explosive spill will be handled per SOP KN-100.
15. Hand cart and/or trailer will be pushed, not pulled, when possible.
16. Tail gates will be checked for overlap on igloo ramp and/or docks.
17. No more than two (2) people are allowed in cab of vehicles transporting explosives.
18. Door of building or storage area will not be opened until transporting vehicle motor is turned off.
19. All incidents, accidents and injuries regardless of how minor shall be reported to supervision immediately. Supervision will notify Safety Engineer or Safety Department.
20. Standing Operating Procedures will be reviewed:
  - A. When first assigned to an operation.
  - B. When an approved formal revision or change is made to an SOP.
  - C. Annually, this annual review will be a "walk-thru, talk-thru" with the Supervisor, leader, or trainer as the instructor and documented on Form KAAP 98 Training Documentation. Employee will sign name and date on Form KAAP 98 when Standing Operating Procedure and/or any operation has been revised and read.
  - D. After absence from the job in excess of fifteen consecutive work days.
21. Standing Operating Procedures will be conveniently located for operators access.
22. Forklift operator will insure that forklift has a current load test/inspection due date.

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23. All forklift operators will have a current valid operator's license in their possession.
24. Each truck shall be equipped with at least one standard Class 10-BC or equivalent portable fire extinguishers. The fire extinguisher will be mounted on the outside of the cab, on driver's side.
25. There shall be no smoking by personnel in a vehicle transporting explosives.
26. When operating any vehicle, secure seat belt and ensure that all passengers secure seat belts before placing vehicle in motion.
27. \* Drivers of vehicles will open both gates at storage locations and make sure there is adequate gate clearance before entering or exiting all areas.
28. If no guide is available, the driver will:
  - A. Dismount and physically circle the vehicle.
  - B. Visually check the backing area for adequate clearance.
29. Seat belts on fork lifts will be used if installed.
30. \* Drivers will note any deficiencies or malfunctions at the bottom for "TRUCK AND EQUIPMENT OPERATIONAL RECORD" FORM DZI-596, or on the reverse side of "WEEKLY VEHICLE OPERATIONAL RECORD" form DZI 721.

### ELECTRICAL STORM PROCEDURE

Whenever an electric storm approaches the installation, personnel shall be evacuated from locations at which there is a hazard from explosives which could be initiated by lightning.

The Supervisor in charge of the activity will be responsible for ordering the stoppage of operations and the evacuation of personnel.

### SPECIAL SECURITY REGULATIONS

1. \* Unattended explosive laden commercial trucks will be secured by means of a pre-numbered seal or padlock on each door of vehicle.
2. Prenumbered seals will be controlled and issued from the office of the Supervisor.
3. \* Those employees responsible for application of seals or padlocks will be designated by their supervisors.

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4. Each employee responsible for prenumbered seals will check out from the dispatcher office a minimum quantity expected to satisfy one (1) days requirements. Seals not used each day will be returned to the dispatcher office at the end of the shift.
5. Each seal installed will be recorded and an audit trail will be maintained.

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\*\*\*\*\*  
**TOTAL QUALITY MANAGEMENT** is a continuous improvement process. In order to work at continuous improvement, **EVERY** member of DZI-Kansas must focus our concepts, relationships, goals, and objectives toward a **TOTAL QUALITY** effort. **THAT GOAL IS CONFORMANCE TO CUSTOMERS' EXPECTATIONS 100% OF THE TIME.**  
\*\*\*\*\*

## STANDING OPERATING PROCEDURE

- A. FOR:** UNLOADING COMMERCIAL TRUCKS CONTAINING EXPLOSIVES OR EXPLOSIVE COMPONENTS
- B. OPERATION NO.:** 1
- C. LOCATION:** Igloo and/or Dock
- D. SOP NUMBER:** KN-0000-L-007
- E. CHANGE NO.:** 2
- F. OPERATION:** Receive Truck at Igloo, Above Ground Magazine or Unloading dock in Preparation for Unloading
- G. EXPLOSIVE UNITS:** **EXPLOSIVE POUNDS:** See Appendix "A" & "B"
- H. PERSONNEL LIMITS:** See Appendix "A" & "B" **TRANSIENTS:** See Appendix "A" & "B"

I.		
Step No.	Description	Specific Instructions (Safety, Operational, Quality Checks)
1.	Log of commercial truck at gate.	1.a.(O) Commercial explosive trucks will be logged at Explosive Area Gates as required.
2.	Receive truck at unloading site.	2.a.(O) Receives commercial trucks containing explosives or explosive components at the unloading site by the Stores Foreman or a member of the unloading crew.
		2.b.(O) Commercial truck driver spots trailer at igloo porch, above ground magazine door or dock or at portable ramp.

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2.c.(S) Motor will be turned off. Brakes set, and drive wheel on tractor choked.

**NOTE:** Conveyor system may be utilized for unloading.

**Warning:** If portable ramp is used, crew member must affix safety chain from rear end of trailer to portable ramp.

2.d.(O,S) A member of the unloading crew will break seals on trailer doors. Open doors. Remove dunnage if present in preparation for unloading. Remove nails or bend over so that points of nails are not protruding.

2.e.(O) Remove shipping documents from truck and compare them with actual load for compliance.

2.f.(O,S) Stack dunnage in a neat and orderly manner outside igloo or unloading dock for removal to proper disposition site.

## J. SPECIAL REQUIREMENTS

1. Care should be exercised in opening truck doors because of the possibility of damaged or shifting loads. GOOD HOUSEKEEPING SHALL BE MAINTAINED AT ALL TIMES.
2. \* Two fire extinguishers will be provided at igloo or magazine and can be obtained at the area guard house if two extinguishers are not available on the truck.
3. Doors of magazine will remain closed until ignition of truck is turned off and will be closed prior to starting vehicle.
4. \* All operators will wear approved safety glasses with side shields (if required) and approved spark proof safety shoes.
5. If portable ramp is used, safety chains must be secured to truck trailer before unloading begins.
6. If forklift is used to unload trailer, dollies on front end of trailer must be lowered and tractor must remain under trailer during unloading operation.
7. Containers or hazardous materials shall not be used as conveyor support.

### DZI PROPRIETARY

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## STANDING OPERATING PROCEDURE

- A. FOR:** UNLOADING COMMERCIAL TRUCKS CONTAINING EXPLOSIVES OR EXPLOSIVE COMPONENTS
- B. OPERATION NO.:** 2
- C. LOCATION:** Igloo and /or Dock
- D. SOP NUMBER:** KN-0000-L-007
- E. CHANGE NO.:** 3
- F. OPERATION:** Unload Contents of Truck and Store in Igloo or Above Ground Magazine
- G. EXPLOSIVE UNITS:** See Appendix "A" & "B"      **EXPLOSIVE POUNDS:** See Appendix "A" & "B"
- H. PERSONNEL LIMITS:** See Appendix "A" & "B"      **TRANSIENTS:** See Appendix "A" & "B"

I.		
Step No.	Description	Specific Instructions (Safety, Operational, Quality Checks)
1. Open igloo.	1.a.(O,S)	Unlock and open igloo or above ground magazine door.
	1.b.(O,S)	Manually or using appropriate material handling equipment, transfer contents from trailer into storage. Store in accordance with applicable storage drawings.

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**NOTE:** \* If during the unloading operation, damaged containers are observed that might present a safety hazard, stop unloading operations. Immediate supervisor or their designee will be notified immediately.

1.c.(O) \* After trailer is unloaded, place a completed Magazine Data Card containing the nomenclature, date, lot number, tally number, stock code number, condition, quantity, etc. on items received. Also make quantity issue entries on the DAILY SUMMARY OF MAGAZINE TRANSACTIONS sheet.

**NOTE:** \* Enter status code "R" on Magazine Data Card.

2. Direct line Shipment

2.a.(O) If contents in trailer are issued direct to the production lines, the commercial trailer will be spotted at the unloading dock, contents removed, and placed on industrial carts or pallets and manually or using forklift, loaded into lowboy bomb trailer.

3. Unattended trailers

3.a.(O,S) \* Full or partial trailers will be secured by means of locks or seals to prevent entry.

4. Unloaded trailer.

4.a.(O,S) After contents of truck have been unloaded, remove placards. Check interior of trailer to see that it is free from loose explosives or other materials. Place explosive sweepings in a velostat bag identified with a completed Hazardous Waste label. Notify the munitions/demolition crew to pick up and transfer sweeping to the demolition grounds.

4.b.(O) Close and lock igloo or above ground magazine door.

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5. Escort commercial driver      5.a.(O,S)      If used, remove portable ramp or conveyor system from trailer. Close trailer doors. Remove wheel chocks. Release brakes and start motor. Truck pass (DZI-674) will be completed by Stores Foreman or his representative. The truck driver will be escorted to the explosive area gate, where he will log out of the area as required, and proceed to Gate #3.

#### J. SPECIAL REQUIREMENTS

1. Gasoline or electric forklift trucks may be utilized on unloading dock when material is palletized.
2. Electric forklift only will be utilized in igloo.
3. Good housekeeping will be maintained at all times.
4. All operators will wear approved safety glasses with side shields (if required) and approved spark proof safety shoes.

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## STANDING OPERATING PROCEDURE

**A. FOR:** UNLOADING COMMERCIAL TRUCKS CONTAINING  
EXPLOSIVES OR EXPLOSIVE LOADED COMPONENTS

**B. OPERATION NO.:** 3

**C. LOCATION:** Loading Igloo and/or Dock

**D. SOP NUMBER:** KN-0000-L-007

**E. CHANGE NO.:** 2

**F. OPERATION:** Clean-Up Area

**G. EXPLOSIVE UNITS:** See Appendix "A" & "B"      **EXPLOSIVE POUNDS:** See Appendix "A" & "B"

**H. PERSONNEL LIMITS:** See Appendix "A" & "B"      **TRANSIENTS:** See Appendix "A" & "B"

I.		
Step No.	Description	Specific Instructions (Safety, Operational, Quality Checks)
1. Remove dunnage.	1.a.(O)	Remove dunnage and debris from storage and dock area. Transfer to disposal area.
	1.b.(O)	Sweep floors, drains and apron. Inert sweepings will be placed in plastic bags and hauled to nearest inert trash cans.
2. Remove industrial	2.a.(O)	Store industrial trailers on trailers. Loading dock.
3. Remove empty	3.a.(O)	The Supervisor or his designee will make sure empty trailers are moved.

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## J. SPECIAL REQUIREMENTS

1. \* All operators will wear approved safety glasses with side shields (if required) and approved spark proof safety shoes.

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## EXPLOSIVE AND PERSONNEL LIMITS

### 1800 Area

Dock: 175,000 Explosives  
Casuals 10; Operators 26

Magazine: Explosive limit: 0 pounds  
Casuals 10; Operators 26

### 1900 Area

Dock: 250,000 pounds  
Casuals 10; Operators 26

Magazine: Explosive limit: See Appendix  
Casuals 3; Operators 5

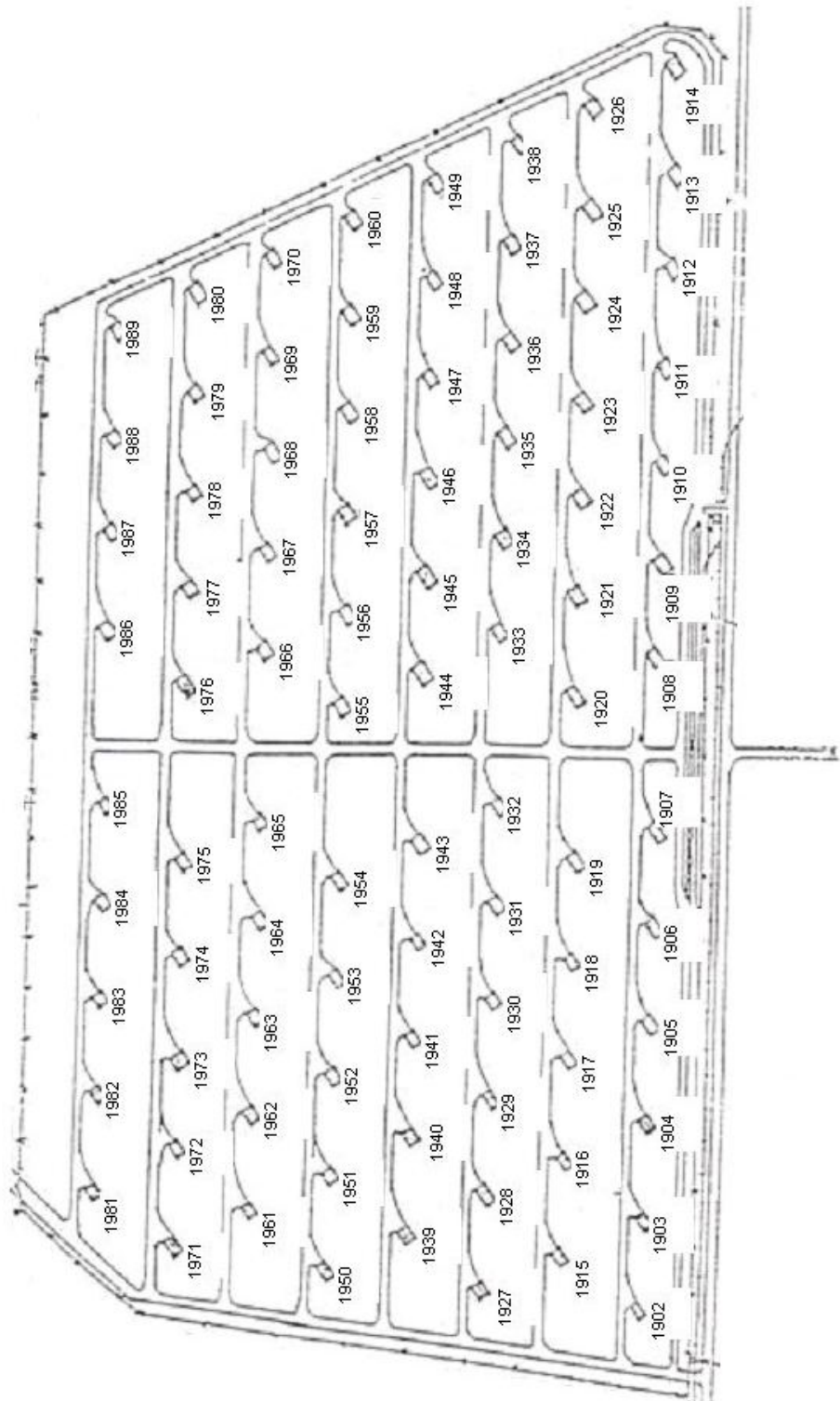
### 2700 Area

Magazine: Explosive limit: 50 pounds for 2707, 2708, 2709  
Casuals 1; Operators 2

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**Maximum of  
100,000  
Pounds  
Explosive  
Per Igloo**



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**LINE SERVICE TRANSPORTATION VEHICLES**  
**KN-0000-L-015**

**OPERATIONAL INDEX**

OPRTN.	Bldg. No.	Explos. Limits	Personnel Limits	TITLE
A	N/A	N/A	N/A	Operational Index
B	N/A	N/A	N/A	General Safety Requirements
C	N/A	N/A	N/A	Load Limits on Transporting Equipment
D	N/A	N/A	N/A	Motor Vehicle Accidents
1	N/A	N/A	N/A	Pre-Operation
2	N/A	N/A	N/A	Connection of Truck-Tractor With Semi-Trailer
3	N/A	N/A	N/A	Uncoupling the Semi-Trailer
4	N/A	N/A	N/A	Transporting Inert Materials
5	N/A	N/A	N/A	Transporting Explosives
6	N/A	N/A	N/A	Refueling of Gasoline Powered Material Handling Equipment
7	N/A	N/A	N/A	Cease of Shift Operation

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## **D&Z LINE SERVICE TRANSPORTATION VEHICLES**

### **GENERAL SAFETY REQUIREMENTS**

1. No more than two persons shall ride in a vehicle transporting explosives.
2. Each truck shall be equipped with at least one fully charged Class 10-BC rated portable fire extinguisher mounted outside the cab on the driver's side of the vehicle.
3. Appropriate symbols will be placed on all vehicles transporting explosives immediately prior to loading and shall be removed from transporting vehicles immediately upon completion of unloading.

### **SECURITY**

1. An explosive laden vehicle will be kept under surveillance at all times, except in a controlled area (internal procedure).
2. When transporting to and from the production lines, the driver will verify his load against paperwork given him by the checker at the loading site. He will surrender this paperwork to the checker at the unloading site. In an emergency loads may be directed with the paperwork following on a subsequent trip.

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## D&Z LINE SERVICE TRANSPORTATION VEHICLES

### LOAD LIMITS ON TRANSPORTING EQUIPMENT

A. Regular semi-trailers:

1. Regular semi-trailers pulled by a 6x4 or 4x2 truck-tractor will not exceed a 12 ton payload.
2. Specific loads of explosive loaded items are as follows:

a.	105mm projectiles	-	5 pallets/standard trailer
b.	CBU (bombs)	-	4 coffins/standard trailer
c.	155mm projectiles	-	21 pallets/standard trailer
d.	M42/M46 bulk		
	shippers	-	4 pallets/standard trailer
e.	M483A1 Expulsion		
	Charge	-	5 pallets/standard trailer
f.	M55 Detonator	-	5 pallets/standard trailer
g.	CEM Booster	-	5 pallets/standard trailer
* h.	60mm Mortars	-	5 pallets/standard trailer
* i.	81mm Mortars	-	5 pallets/standard trailer
* J.	Demo Charges	-	5 pallets/standard trailer

B. New regular semi-trailers (longer):

1. New regular semi-trailers pulled by a 6x4 or 4x2 truck-tractor will not exceed a 14 ton payload.
2. Specific loads of explosive loaded items are as follows:

a.	105mm projectiles	-	7 pallets/standard trailer
b.	CBU (bombs)	-	4 coffins/standard trailer
c.	155mm projectiles	-	30 pallets/standard trailer
d.	M42/M46 bulk		
	shippers	-	6 pallets/standard trailer
e.	M483A1 Expulsion		
	Charge	-	7 pallets/standard trailer
f.	M55 Detonator	-	7 pallets/standard trailer

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	g.	CEM Booster	-	7 pallets/standard trailer
*	h.	60mm Mortars	-	7 pallets/standard trailer
*	i.	81mm Mortars	-	7 pallets/standard trailer
*	J.	Demo Charges	-	7 pallets/standard trailer

- D. The payload tonnage up to the maximum will depend on whether the load can be secured.

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## **MOTOR VEHICLE ACCIDENTS**

### **I. On-Plant Accidents**

A. When involved in a motor vehicle accident, operator of vehicle involved will:

1. If any personal injury is incurred, arrange for care of injured.
2. Contact Supervisor.
3. \*Notify Guard Department (620-778-1720) and Safety Dept. (ext. 498).
4. Safeguard any load or contents carried by vehicle.
5. Do not move vehicle unless:
  - a. Authorized by Guard Department,
  - b. Authorized by Safety Department,
  - c. Moving vehicle will save life and/or prevent further property damage. If vehicle must be moved, move it only enough to clear traffic.
6. Note the following:
  - a. Condition of road.
  - b. Position of vehicle(s).
  - c. Names of others involved in accident.
  - d. Any other pertinent information not readily available after vehicle is moved.

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## STANDING OPERATING PROCEDURE

**FOR:** D&Z LINE SERVICE TRANSPORTATION VEHICLES

**SOP NUMBER:** KN-0000-L-015

**LOCATION:** N/A

**OPERATION NUMBER:** 1

**CHANGE NUMBER:** 4

**TITLE:** Pre-Operation

I. Step No.	Description	Specific Instructions (Safety, Operational, Quality Checks)
1.	Assignment	1.a.(O) At the beginning of the shift, the drivers will be ready for assignment.
2.	Licensing of driver(s)	2. a. (O, S) * All drivers in Transportation will be classified as Professional Drivers and will be certified by the Training Instructor or Stores Foreman in accordance with DZI policy. They must have a state drivers license/CDL.
3.	*Responsibility of driver(s).	3. a, (O, S) It is the responsibility of all persons driving DZI owned vehicles to ensure that the vehicle is clean. The passenger and cargo areas must be free of all litter and the interior clean.
4.	Vehicle departure	4.a.(O,S) Trip sheet will be filled out each time vehicle is used by a new operator each day.
5.	Vehicle damage	5.a.(O,S) If vehicle has been damaged or is in an unsafe condition, do not move it; report to the Foreman or Dispatcher immediately.

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6. Alertness for unusual noises 6.a.(O,S) During operation the driver will be alert for any unusual noises or odors, irregular instrument readings or other malfunctions.
7. Vehicle maintenance 7. a. (0, S) At the end of the shift, if time permits, vehicles will be serviced in preparation for the next use (check oil, refuel tanks, bleed air reservoirs)

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## STANDING OPERATING PROCEDURE

**FOR:** D&Z LINE SERVICE TRANSPORTATION VEHICLES

**SOP NUMBER:** KN-0000-L-015

**LOCATION:** N/A

**OPERATION NUMBER:** 2

**CHANGE NUMBER:** 2

**TITLE:** Connection of Truck-Tractor with Semi Trailer

I. Step No.	Description	Specific Instructions (Safety, Operational, Quality Checks)_____
1.	Check fifth wheel	1.a.(O) Check fifth wheel to see that it is open. 1.b.(O,S) Back truck-tractor up to trailer. 1.c.(O,S) Check to assure that fifth wheel is properly aligned and will move under trailer.
2.	Check trailer brakes.	2.a.(O,S) Check to assure trailer brakes are holding and/or trailer is properly chocked. 2.b.(O,S) Back truck-tractor under trailer until lock assembly closes. 2.c.(O,S) Connect air hoses and apply air to trailer. 2.d.(O,S) Put truck-tractor in forward gear, apply trailer brakes and move truck-tractor forward to assure fifth wheel pin is securely locked. 2.e.(O,S) Raise dollies, attach cannon plug and check lights to see that they are functioning.

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## STANDING OPERATING PROCEDURE

**FOR:** D&Z LINE SERVICE TRANSPORTATION VEHICLES

**SOP NUMBER:** KN-0000-L-015

**LOCATION:** N/A

**OPERATION NUMBER:** 3

**CHANGE NUMBER:** 2

**TITLE:** Uncoupling the Semi-Trailer

I. Step No.	Description	Specific Instructions (Safety, Operational, Quality Checks)
1. Chock trailer.	1.a.(O,S)	Before trailer is disconnected from truck-tractor, it will be chocked if on a down grade or if material handling equipment is to be operated in the trailer.
2. Close shut-off	2.a.(O,S)	Close shut-off valves on the service and emergency air line. Uncouple the air lines from the trailer and fit the couplings on truck-tractor air line couplings (if equipped). The trailer brakes will set automatically when emergency air line is uncoupled.
	2.b.(O,S)	Disconnect cannon plug.
	2.c.(O,S)	Lower dollies until on ground level.
3. Loaded trailer.	3.a.(O,S)	If trailer is loaded, dolly pads will be put between the ground and the dollies.
4. Open fifth wheel.	4.a.(O,S)	Open fifth wheel and drive truck-tractor out from under trailer.

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APPROVAL / PROCEDURE DATE \_\_\_\_\_

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## STANDING OPERATING PROCEDURE

**FOR:** D&Z LINE SERVICE TRANSPORTATION VEHICLES

**SOP NUMBER:** KN-0000-L-015

**LOCATION:** N/A

**OPERATION NUMBER:** 4

**CHANGE NUMBER:** 2

**TITLE:** Transporting Inert Materials

I. Step No.	Description		Specific Instructions (Safety, Operational, Quality Checks)
1.	Receive assignment	1.a.(O,S)	Receive assignment and report to assigned area.
2.	Position vehicle.	2. a. (0)	Position vehicle for loading or unloading.
3.	Guide will be used	3. a, (0, S)	When backing into a loading or unloading area, the services of a guide will be obtained. Visual hand signals as well as voice guidance will be utilized in all instances. If no assistance is available, visually inspect the area you intend to back into by physically circling the vehicle for adequate clearance.
4.	Avoid backing into buildings.	4.a.(O,S)	Care shall be taken to avoid backing into drip covers, buildings, etc. Remain at least 12" from building.
5.	Turn off motor.	5.a.(O,S)	Switch off motor and set brakes.
		5.b.(O,S)	Chock wheels of vehicle.

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|-------------------------------------|-----------|--|
| 6. Loading and unloading completed. | 6.a.(O,S) | When loading or unloading is completed, check to see that is has been properly accomplished. |
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## STANDING OPERATING PROCEDURE

**FOR:** D&Z LINE SERVICE TRANSPORTATION VEHICLES

**SOP NUMBER:** KN-0000-L-015

**LOCATION:** N/A

**OPERATION NUMBER:** 5

**CHANGE NUMBER:** 3

**TITLE:** Transporting Explosives

I. Step No.	Description		Specific Instructions (Safety, Operational, Quality Checks)
1.	Receive assignment	1.a.(O,S)	Receive assignment and report to assigned area.
2.	Position vehicle.	2. a. (0)	Position vehicle for loading of explosives.
3.	Guide will be used when backing.	3. a, (0, S)	When backing into a loading or unloading area, the services of a guide will be obtained. Visual hand signals as well as voice guidance will be utilized in all instances. If no assistance is available, visually inspect the area you intend to back into by physically circling the vehicle for adequate clearance.
4.	Turn off motor.	4.a.(O,S)	Switch off motor and set brakes.
		4.b.(O,S)	Dismount vehicle and chock wheels of vehicle.
5.	Display No. 1 Symbol	5.a.(O.S)	When the loading begins, display fire symbol on front of vehicle.

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- |                          |            |  |
|--------------------------|------------|--|
|                          | 5.b.(O,S)  | After loading is complete, check to assure that loading is properly accomplished, load is secured and that vehicle is not overloaded.  |
| 6. Display No. 1 Symbol  | 6.a.(O,S)  | Display fire symbol on rear of vehicle.  |
| 7. Verification of load  | 7.a.(O) *  | For transporting to and from the production lines, the driver will verify his load against paperwork given him by the Quality Control Inspector/Material Coordinator at the loading site, He will surrender this paperwork to the QC Inspector/Material Coordinator at the unloading site. In an emergency, loads may be directed with the paperwork following on a subsequent trip. |
| 8. Designated area.      | 8.a.(O)    | Proceed to designated area.  |
| 9. Required attendance   | 9.a.(O,S)  | Explosives will not be left unattended.  |
| 10. Position vehicle.    | 10.a.(O,S) | Position transporting vehicle for unloading.   |
|                          | 10.b.(O,S) | Switch off motor, set brakes, dismount and chock wheels.   |
| 11. Motor requirement    | 11.a.(O,S) | Motors need not be switched off when needed to power material handling equipment.  |
| 12. Remove No. 1 symbols | 12.a.(O,S) | When unloading is complete, remove fire symbols.   |
| 13. Remove chocks.       | 13.a.(O,S) | Remove chocks, remount transporting vehicle and proceed with assignment.   |

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**TOTAL QUALITY MANAGEMENT** is a continuous improvement process. In order to work at continuous improvement, **EVERY** member of DZI-Kansas must focus our concepts, relationships, goals, and objectives toward a **TOTAL QUALITY** effort. **THAT GOAL IS CONFORMANCE TO CUSTOMERS' EXPECTATIONS 100% OF THE TIME.**  
\*\*\*\*\*

## STANDING OPERATING PROCEDURE

**FOR:** D&Z LINE SERVICE TRANSPORTATION VEHICLES  
**SOP NUMBER:** KN-0000-L-015  
**LOCATION:** N/A  
**OPERATION NUMBER:** 6  
**CHANGE NUMBER:** 4  
**TITLE:** Re-Fueling of Gasoline Powered Material Handling Equipment

I. Step No.	Description	Specific Instructions (Safety, Operational, Quality Checks)
1.	Proceed to area.	1.a.(O,S) Proceed to area location of fork lift. 1.b.(O,S) Switch off motor, set brakes, dismount and chock wheels of trailer.
2.	Re-fueling of lift trucks	2. a. (O,S) * Re-fueling of lift trucks will be accomplished not less than 50 feet from an inert or combustible operation or building, not less than 100 feet from an explosive operation or building, and midway between earth-covered magazines.  A. Transfer the lift truck to be re-fueled to a safe location.  B. Attach ground cables to lift truck(s).  C. Re-fuel lift truck(s).  D. If fuel is spilled while re-fueling, do not start lift trucks until gasoline has been washed and removed. If excessive amount is spilled, wash area back of trailer before

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APPROVAL / PROCEDURE DATE \_\_\_\_\_



moving trailer (See safety requirements, this operation).

- E. Check oil level and fill as needed.
- F. Return lift truck to operating location.

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## STANDING OPERATING PROCEDURE

**FOR:** D&Z LINE SERVICE TRANSPORTATION VEHICLES

**SOP NUMBER:** KN-0000-L-015

**LOCATION:** N/A

**OPERATION NUMBER:** 7

**CHANGE NUMBER:** 4

**TITLE:** Cease of Shift Operation

I.				
Step No.	Description			Specific Instructions (Safety, Operational, Quality Checks)_____
1.	Park vehicle.	*	1.a.(O)	Park vehicle in parking lot west of Building 1102 unless vehicle is to stay at operating location. Put vehicle in gear and set brakes.
			1.b.(O)	Roll door window up, close side window vents.
			1. c.(0,S)	Remove ignition key and lock both doors.
		*	1.d.(0)	Turn ignition key into Transportation Office, Building 1102.
			1, e. (0)	Driver will ensure that all Issues Forms are completed and turn in to the warehouse person,

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**APPENDIX F-2**

**CHECKLIST FOR REVIEW OF KANSAS HAZARDOUS WASTE PROGRAM PERMIT  
APPLICATION**

**CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS****SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement		Federal Regulation	Review Consideration <sup>a</sup>	Location in Application <sup>b</sup>	See Attached Comment Number <sup>c</sup>
F-1	Security	270.14(b)(4); 264.14		Section F-1	
F-1a	Security Procedures and Equipment	270.14(b)(4); 264.14	Unless waiver is granted, facility must have surveillance system or a barrier to entry.	Section F-1a	
F-1a(1)	24-Hour Surveillance System	270.14(b)(4); 264.14	Monitor/camera, guards, or personnel must continuously monitor or control access to active parts of facility.	Section F-1a(1)	
F-1a(2)(a)	Barrier	270.14(b)(4); 264.14	This item required if 24-hour surveillance system is not feasible. Describe artificial or natural barrier.	Section F-1a(2)(a)	
F-1a(2)(b)	Means to Control Entry	270.14(b)(4); 264.14	This item required if 24-hour surveillance system is not feasible.	Section F-1a(2)(b)	
F-1a(3)	Warning Signs	270.14(b)(4); 264.14	Signs in english must be posted at each entrance, and be legible from 25 feet.	Section F-1a(3)	
F-1b	Waiver	270.14(b)(4); 264.14	Owner/operator must prevent unknowing entry, and minimize unauthorized entry of persons or livestock unless can demonstrate:	NA	
F-1b(1)	Injury to Intruder	270.14(b)(4); 264.14	Assure physical contact with waste, structure, or equipment will not injure unknowing intruder.	NA	
F-1b(2)	Violation Caused by Intruder	270.14(b)(4); 264.14	Assure disturbance of waste or equipment by unauthorized intruder will not cause a violation.	NA	
F-2	Inspection Schedule	270.14(b)(5); 264.15	Inspection is required for monitoring equipment, safety emergency equipment, communication and alarm systems, decontamination equipment, security devices, and operating and structural equipment.	Section F-2	
F-2a	General Inspection Requirements	270.14(b)(5); 264.15(a),(b); 264.33		Section F-2a	
F-2a(1)	Types of Problems	270.14(b)(5); 264.15(b)(3)	Inspection checklist must identify types of problem.	Section F-2a(1)	
F-2a(2)	Frequency of Inspections	270.14(b)(5); 264.15(b)(4)	Based on rate of deterioration of equipment and probability of environmental or human health incident.	Section F-2a(2)	
F-2a(3)	Schedule of Remedial Action	270.14(b)(5); 264.15(c)	Owner/operator must immediately remedy any deterioration or malfunction of equipment or structures to ensure problem does not lead to environmental or human health hazard.	Section F-2a(3)	
F-2a(4)	Inspection Log	270.14(b)(5); 264.15(d)	Provide example log or summary.	Section F-2a(4)	
F-2b	Specific Process Inspection Requirements	270.14(b)(5)		Section F-2b	

**CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS****SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement		Federal Regulation	Review Consideration <sup>a</sup>	Location in Application <sup>b</sup>	See Attached Comment Number <sup>c</sup>
F-2b(1)	Container Inspection	270.14(b)(5); 264.174	Inspect at least weekly.	Section F-2b(1)	
F-2b(2)	Tank System Inspection	270.14(b)(5); 264.195	Owner/operator must develop schedule and inspect at least once daily.	NA	
F-2b(2)(a)	Tank System External Corrosion and Releases	270.14(b)(5); 264.195(b)(1)	Owner/operator must inspect that aboveground portion and check for corrosion.	NA	
F-2b(2)(b)	Tank System Construction Materials and Surrounding Area	270.14(b)(5); 264.195(b)(3)	Observe construction materials and area around external portion for signs of release of hazardous waste.	NA	
F-2b(2)(c)	Tank System Overfilling Control Equipment	270.14(b)(5); 264.195(a)	Develop and follow schedule for inspection of overfill controls.	NA	
F-2b(2)(d)	Tank System Monitoring and Leak Detection Equipment	270.14(b)(5); 264.195(b)(2)	Analyze data gathered from monitoring equipment to ensure tank is operating according to design.	NA	
F-2b(2)(e)	Tank System Cathodic Protection	270.14(b)(5); 264.195(c)	Inspect according to schedule.	NA	
F-2b(3)	Waste Pile Inspection	270.14(b)(5); 270.18(d); 264.254(b)	Describe how waste pile will be inspected daily and after storms.	NA	
F-2b(3)(a)	Runon and Runoff Control System	270.14(b)(5); 264.254(b)(1)	Inspections should identify deterioration, malfunction, or improper operation of control system.	NA	
F-2b(3)(b)	Wind Dispersal System	270.14(b)(5); 264.254(b)(2)	Facility should inspect proper function of wind dispersal system.	NA	
F-2b(3)(c)	Leachate Collection and Removal System	270.14(b)(5); 270.18(d); 264.254(b)(3),(c)	Determine whether there is leachate present in functioning double liner system.	NA	
F-2b(4)	Surface Impoundment Inspection	270.14(b)(5); 270.17(c); 264.226(b),(c)	Describe how each surface impoundment will be inspected to meet requirements of monitoring and inspection and waiver requirement.	NA	
F-2b(4)(a)	Condition Assessment	270.14(b)(5); 264.226(b)	Describe how surface impoundment will be inspected weekly and after storms.	NA	
F-2b(4)(a)(1)	Overtopping Control System	270.14(b)(5); 264.226(b)(1)	Inspect for deteriorating, malfunction, or improper operation of control system.	NA	
F-2b(4)(a)(2)	Impoundment Contents	270.14(b)(5); 264.226(b)(2)	Inspect for sudden drop in level of impoundment contents.	NA	
F-2b(4)(a)(3)	Dikes and Containment Devices	270.14(b)(5); 264.226(b)(3)	Inspect for severe erosion in containment devices.	NA	

**CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS****SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement		Federal Regulation	Review Consideration <sup>a</sup>	Location in Application <sup>b</sup>	See Attached Comment Number <sup>c</sup>
F-2b(4)(b)	Structural Integrity	270.14(b)(5); 264.226(c)	Specify procedure for assessing integrity of surface impoundments.	NA	
F-2b(4)(c)	Leak Detection System	270.14(b)(5); 270.17(c); 264.226(d)	Describe how double liner system and leak detection system will be inspected.	NA	
F-2b(5)(a)	Incinerator and Associated Equipment	270.14(b)(5); 264.347(b)	Describe procedures for daily visual inspection of incinerator and associated equipment.	NA	
F-2b(5)(b)	Incinerator Waste Feed Cutoff System and Alarms	270.14(b)(5); 264.347(c)	Describe procedure and frequency of testing emergency waste feed cutoff system.	NA	
F-2b(6)	Landfill Inspection	270.14(b)(5); 264.303(b)	For operating landfill, describe how it will be inspected weekly and after storms.	NA	
F-2b(6)(a)	Runon and Runoff Control System	270.14(b)(5); 264.303(b)(1)	Deterioration, malfunction, or improper operation of runon and runoff control system.	NA	
F-2b(6)(b)	Wind Dispersal Control System	270.14(b)(5); 264.303(b)(2)	Proper functioning of wind dispersal control systems, where present.	NA	
F-2b(6)(c)	Leachate Collection and Removal System	270.14(b)(5); 264.303(b)(3),(c)	In properly functioning double liner system, is there a presence of leachate? Leak detection required under 264.301(c) or 264.301(d) must record amount of leakage from each system weekly.	NA	
F-2b(7)	Land Treatment Facility Inspection	270.14(b)(5); 264.273(g)	Describe how land treatment facility will be inspected weekly and after storms.	NA	
F-2b(7)(a)	Runon and Runoff Control System	270.14(b)(5); 264.273(g)(1)		NA	
F-2b(7)(b)	Wind Dispersal Control System	270.14(b)(5); 264.273(g)(2)		NA	
F-2b(8)	Miscellaneous Unit Inspections	270.14(b)(5); 264.602	Provide inspection program that ensures compliance with standards in 264.601 and 270.23.	Section F-2b(8)	
F-2b(9)	Boilers and Industrial Furnaces (BIF) Inspection	270.14(b)(5); 264.15; 266.102(a)(2) (ii),(e)(8); 266.111(e)(3)	Demonstrate that BIF will be visually inspected daily, automatic waste feed cutoff inspected at least weekly, and direct transfer area at least once an hour when waste is being transferred.	NA	
F-2b(10)	Containment Building Inspection	270.14(b)(5); 264.1101(c)(3),(4)	Demonstrate owner/operator will inspect and document at least weekly, monitoring equipment, leak detection equipment, containment building, and surrounding areas for waste releases.	Section F-2b(10)	

**CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS****SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement		Federal Regulation	Review Consideration <sup>a</sup>	Location in Application <sup>b</sup>	See Attached Comment Number <sup>c</sup>
F-2b(11)	Drip Pad Inspection	270.14(b)(5); 264.574	Demonstrate that the drip pad owner/operator will inspect and document at least weekly and after storms, the leak detection and collection equipment, the drip pad surface, and the runoff and runoff control systems for evidence of deterioration, malfunction, improper operation, or leakage of hazardous waste.	NA	
F-3	Waiver or Documentation of Preparedness and Prevention Requirements	270.14(b)(6) 264.32(a) - (d)	Facility must submit justification for any waiver to requirements of this section.	Section F-3	
F-3(a)	Equipment Requirements	270.14(b); 264.32		Section F-3a	
F-3(a)(1)	Internal Communication	270.14(b); 264.32(a)	Describe internal communication or alarm system used to provide immediate emergency instruction to personnel.	Section F-3a(1)	
F-3(a)(2)	External Communication	270.14(b); 264.32(b)	Describe device for summoning emergency assistance from local police, fire, or state/local emergency response.	Section F-3a(2)	
F-3(a)(3)	Emergency Equipment	270.14(b); 264.32(c)	Demonstrate that portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment are available.	Section F-3a(3)	
F-3(a)(4)	Water and Fire Control	270.14(b); 264.32(d)	Demonstrate facility has adequate fire control systems, water volume and pressure, foaming equipment, automatic sprinklers, etc.	Section F-3a(4)	
F-3(a)(5)	Testing and Maintenance of Equipment	270.14(b); 264.33	Demonstrate communication, alarm, fire control equipment, spill control equipment, and decontamination equipment are tested and maintained.	Section F-3a(5)	
F-3(a)(6)	Access to Communication or Alarm System	270.14(b); 264.34	When waste is being hauled, all personnel must have access to internal alarm or communication device.	Section F-3a(6)	
F-3(b)	Aisle Space Requirement	270.14(b); 264.35	Aisle space is required for unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment in case of emergency.	Section F-3b	
F-3(c)	Documentation of Arrangements with:	270.14(b); 264.37	Owner/operator must make arrangements, as appropriate, with type of waste and hazard potential, for the potential need for services.	Section F-3c	
F-3(c)(1)	Police/Fire Department	270.14(b); 264.37(a)(1)	Arrange to familiarize local fire department and police with facility.	Section F-3c(1)	
F-3(c)(2)	Emergency Response Teams	270.14(b); 264.37(a)(2), (a)(3)		Section F-3c(2)	
F-3(c)(3)	Local Hospitals	270.14(b); 264.37(a)(4)	Arrange to familiarize local hospital with properties of hazardous waste and possible types of injury or illness to expect.	Section F-3c(3)	
F-3(c)(4)	Document Agreement Refusal	270.14(b); 264.37(b)	Document refusal to enter into a coordination agreement.	NA	

**CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS****SECTION F. PROCEDURES TO PREVENT HAZARDS**

Section and Requirement		Federal Regulation	Review Consideration <sup>a</sup>	Location in Application <sup>b</sup>	See Attached Comment Number <sup>c</sup>
F-4	Prevention Procedures, Structures, and Equipment	270.14		Section F-4	
F-4(a)	Unloading Procedures	270.14(b)(8)(i)	Describe procedure used to prevent hazards in unloading operations. Identify possible loading and unloading hazards, and document steps taken to minimize or eliminate possibility of these hazards.	Section F-4a	
F-4(b)	Runoff	270.14(b)(8)(ii)	Describe procedure used to prevent runoff from hazardous waste handling areas.	Section F-4b	
F-4(c)	Water Supplies	270.14(b)(8)(iii)	Describe procedure, structures, equipment used to prevent contamination of water supply.	Section F-4c	
F-4(d)	Equipment and Power Failure	270.14(b)(8)(iv)	Describe procedure used to mitigate the effects of equipment failure and power outages.	Section F-4d	
F-4(e)	Personnel Protection Procedures	270.14(b)(8)(v)	Describe procedure, structures, equipment used to prevent contamination of personnel to hazardous waste.	Section F-4e	
F-4(f)	Procedures to Minimize Releases to the Atmosphere	270.14(b)(8)(vi)	Describe procedure, structures, equipment used to prevent hazardous waste releases to the atmosphere.	Section F-4f	
F-5	Prevention of Reaction of Ignitable, Reactive, and Incompatible Waste	270.14(b)(9)		Section F-5	
F-5a	Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes	270.14(b)(9); 264.17(a),(b)	Waste must be protected from sources of ignition or reaction. Describe precautions taken by facility to prevent actual ignition, including sources of spontaneous ignition and radiant heat. Owner/operator must designate safe areas for smoking and open flames. Post signs where hazard exists.	Section F-5a	
F-5b	General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste	270.14(b)(9); 264.17(a)	Describe precautions taken by facility to prevent reactions that generate heat, produce flammable byproducts, cause risk of fire or explosion, threaten structural integrity, or pose threat to human life or the environment.	Section F-5b; Table F-4	
F-5b(1)	Documentation of Adequacy of Procedures	270.14(b); 264.17(c)	Published literature, trial test, waste analyses, or similar processes may be used.	Section F-5b(1)	
F-5c	Management of Ignitable or Reactive Wastes in Containers	270.15(c); 264.176	Demonstrate that ignitable containers are at least 15 meters from facility property line.	Section F-5c	
F-5d	Management of Incompatible Wastes in Containers	270.15(d); 264.177	Describe procedures that ensure incompatible wastes and materials are not placed in same container.	Section F-5d	
F-5e	Management of Ignitable or Reactive Wastes in Tank Systems	270.16(j); 264.198	Describe operation procedures and how facility treats waste so it is no longer ignitable or how facility stores ignitable or reactive waste.	NA	

SECTION F. PROCEDURES TO PREVENT HAZARDS

Reviewer: \_\_\_\_\_

Checklist Revision Date (December 1997)



**CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS****SECTION F. PROCEDURES TO PREVENT HAZARDS**

<b>Section and Requirement</b>		<b>Federal Regulation</b>	<b>Review Consideration<sup>a</sup></b>	<b>Location in Application<sup>b</sup></b>	<b>See Attached Comment Number<sup>c</sup></b>
F-5f	Management of Incompatible Wastes in Tank Systems	270.16(j); 264.199	Demonstrate that incompatible waste and materials are not stored in same tank.	NA	
F-5g	Management of Ignitable or Reactive Wastes Placed in Waste Piles	270.18(g); 264.256	If waste is reactive or ignitable, describe how handling process will render waste pile nonreactive and/or nonignitable.	NA	
F-5h	Management of Incompatible Wastes Placed in Waste Piles	270.18(h); 264.257	Document how hazardous waste piles of incompatible materials are separated to render them nonreactive.	NA	
F-5i	Management of Ignitable or Reactive Wastes in Surface Impoundments	270.17(h); 264.229	If waste is reactive or ignitable, describe how handling process will render surface impoundments nonreactive and/or nonignitable.	NA	
F-5j	Management of Incompatible Wastes in Surface Impoundments	270.17(h);264.230	Document how hazardous surface impoundments of incompatible materials are separated to render them nonreactive.	NA	
F-5k	Management of Ignitable or Reactive Wastes Placed in Landfills	270.21(f); 264.312	If waste is reactive or ignitable, describe how handling process will prevent reaction or ignition to landfills.	NA	
F-5l	Management of Incompatible Wastes Placed in Landfills	270.21(g); 264.313	Document how hazardous landfills of incompatible materials are separated to render them nonreactive.	NA	
F-5m	Management of Ignitable or Reactive Wastes Placed in Land Treatment Units	270.20(g); 264.281	If waste is reactive or ignitable, describe how handling process will render land treatment units nonreactive and/or nonignitable.	NA	
F-5n	Management of Incompatible Wastes Placed in Land Treatment Units	270.20(h); 264.282	Document how land treatment unit piles of incompatible materials are separated to render them nonreactive.	NA	
F-5o	Management of Incompatible Wastes Placed in Containment Buildings	270.14(a); 264.1101(a)(3)	Subsections include design, primary and secondary containment, barriers to prevent migration, leak detection, and facility logs.	NA	

Notes:

<sup>a</sup> Considerations in addition to the requirements presented in the regulations.<sup>b</sup> For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.<sup>c</sup> If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.